

Food and Drug Administration 10903 New Hampshire Avenue Document Control Center - WO66-G609 Silver Spring, MD 20993-0002

April 16, 2015

Candela Corporation % Janice Hogan Regulatory Counsel Hogan and Lovells US LLP 1835 Market Street, 29th Floor Philadelphia, Massachusetts 19103

Re: K150326

Trade/Device Name: Picoway Laser System Regulation Number: 21 CFR 878.4810

Regulation Name: Laser Surgical Instrument For Use In General And Plastic Surgery

And In Dermatology

Regulatory Class: Class II Product Code: GEX Dated: February 9, 2015 Received: February 9, 2015

Dear Janice Hogan,

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address

http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

## Jennifer R. Stevenson -S

For Binita S. Ashar, M.D., M.B.A., F.A.C.S.
Director
Division of Surgical Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure

# DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration

## **Indications for Use**

Form Approved: OMB No. 0910-0120 Expiration Date: January 31, 2017 See PRA Statement below.

10(k) Number (if known) K150326
Device Name
PicoWay Laser System
Indications for Use (Describe)
The PicoWay Laser System is indicated for the following at the specified wavelength:
532nm: Removal of tattoos for Fitzpatrick skin types I-III to treat the following tattoo colors: red, yellow and orange.
1064nm: Removal of tattoos for all skin types (Fitzpatrick I-VI) to treat the following tattoo colors: black, brown, green, blue and purple.
The PicoWay Laser System is also indicated for benign pigmented lesions removal for Fitzpatrick Skin Types I-IV.
Type of Use (Select one or both, as applicable)
Prescription Use (Part 21 CFR 801 Subpart D) Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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## 510(k) Summary PicoWay Laser System

Submitted by: Candela Corporation

530 Boston Post Road Wayland, MA 01778-1886

Contact Person: Ruthie Amir

Global Vice President of Clinical, Regulatory, and Education

Tel: 508-358-7400 x330 Fax: 508-358-5602

**Date prepared:** April 3, 2015

**Trade Name:** PicoWay Laser System

Common Name: Dermatology Laser System

Classification: Class II

Laser surgical instrument for use in general and plastic surgery and in

dermatology (21 CFR 878.4810)

Product Code GEX

#### **Predicate and Reference Devices:**

Predicate Devices: Cynosure PicoSure™ workstation (K121346) (Primary Predicate)

PicoWay Laser System (K142372)

Reference devices: Syneron Medical Ltd.'s Transcend System (K120510); Candela Corporation's

GentleMAX Pro Laser System (K133283); Quanta System's DUOLITE (K103539); Candela's Q-Switched Alexandrite laser (K081324); HOYA ConBio's RevLite Q-switched Nd:YAG Laser System (K103118, K133254);

Cutera, Inc.'s CoolGlide Aesthetic Lasers (K132185); Fotona QS

Nd:YAG/KTP Laser System (K083889); Cutera's Picosecond Laser System

(K140727, K133945).

#### Intended Use / Indications for Use:

The PicoWay Laser System is indicated for the following at the specified wavelength:

#### 532nm

Removal of tattoos for Fitzpatrick skin types I-III to treat the following tattoo colors: red, yellow and orange.

## 1064nm

Removal of tattoos for all skin types (Fitzpatrick I-VI) to treat the following tattoo colors: black, brown, green, blue and purple.

The PicoWay Laser System is also indicated for benign pigmented lesions removal for Fitzpatrick Skin Types I-IV.

## **Description:**

The PicoWay Laser System is a solid state laser capable of delivering energy at wavelengths of 1064 nm or 532 nm at short durations less than or equal to 900 picoseconds (ps) at repetition rates up to 5 Hz. The device system is comprised of a system console, an articulated arm, and an attached handpiece. The laser output at each wavelength is generated within the laser chassis and delivered to the skin through an articulated arm delivery system terminated by a zoom handpiece (HP). The light-weight and ergonomic zoom handpiece allows the spot size on the skin to be easily adjusted from 3 mm to 6 mm in steps of 1 mm. The system includes an internal calibration port with an internal meter located on the control panel of the system console, which is used to verify the transmission of the laser beam into the articulated arm. The PicoWay system control panel enables the user to select the desired energy density (fluence) level and repetition rate. The control panel is also used to obtain feedback from the system, such as the number of pulses delivered or spot size selected.

## **Technological Characteristics:**

The PicoWay Laser System has the same intended use and similar indications for use, technological characteristics, and operating principles as the Cynosure PicoSure™ workstation (K121346) and the PicoWay Laser System (K142372). The PicoWay device design and components are the same as the previously cleared PicoWay System, and very similar to those of the PicoSure predicate. For each of these device systems, the treatment handpiece is attached to an articulating arm that is connected to the main system console. For each system, the user interface is located at the front/top of the console. For the PicoWay and predicate devices, the laser output at each wavelength is generated within the laser chassis and delivered to the skin through an articulated arm delivery system with a handpiece attached to the end. The handpiece allows the spot size on the skin to be adjusted according to device specifications. Each system thus consists of the articulating arm (and attached handpiece), as well as an electrically powered system console that houses the software, user interface, and produces the laser energy. The PicoWay provides similar key design aspects, including the same or similar spot sizes, laser wavelengths, pulse width, and laser types, as its predicate devices. The frequency (repetition rate) of the PicoWay System is the same as or within the frequency range of the predicates. Further, each of the devices presents a range of spot sizes to allow the user to choose the most appropriate spot size for each patient. Minor differences do not raise any new types of safety or effectiveness questions because the PicoWay parameters are the same as the PicoWay predicate and within the range of the PicoSure predicate.

#### **Performance Data:**

<u>Electrical Safety and Electromagnetic Compatibility</u>: Electrical safety and electromagnetic compatibility (EMC) testing for the PicoWay Laser System was conducted by an independent test laboratory in accordance with IEC 60601-1, Medical electrical equipment, Part 1: General requirements for basic safety and essential performance and with IEC 60601-1-2, Collateral Standard: Electromagnetic Compatibility - Requirements and Tests, 3rd ed. The PicoWay System was determined to be in conformance with applicable IEC standards (IEC 62366, IEC 60601-1, IEC 60601-1-2, IEC 60601-1-6, IEC 60601-2-22, and IEC 60825-1).

Biocompatibility: The biocompatibility of the PicoWay device is also established based on the predicate.

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<u>Software</u>: Software verification and validation testing was conducted and results demonstrated that testing results were found acceptable for software release.

<u>Clinical Data</u>: A single arm, prospective, self-controlled multicenter study was conducted to evaluate the safety and effectiveness of the PicoWay System for the removal of benign pigmented lesions. The clinical evaluation of 26 subjects (29 lesions) at 2 investigational sites demonstrated that the PicoWay performs as intended and presents a favorable safety profile for its indications. The majority of subjects were female, Caucasian, with a mean age of 48 years.

The results of the clinical study demonstrated the favorable safety and effectiveness profile for the PicoWay for the indicated use for benign pigmented lesions removal. As discussed above, the PicoWay device successfully met the protocol-defined primary hypothesis for pigmented lesions clearance, where more than 70% of the treated pigmented lesions achieved 50% or more clearance at the primary endpoint visit based on blinded, independent review. Additional statistical analyses support the robustness of the primary endpoint results.

Consistent with the results observed for the primary endpoint, the study results of the investigator assessments similarly demonstrated a substantial degree of pigmented lesions clearance. Subject assessments further confirmed that the device treatment was generally considered low pain, and available satisfaction data trended towards overall satisfaction with treatment.

Treatment with the PicoWay device also demonstrated a positive safety profile, with no device related serious adverse events, no deaths, and no withdrawals due to adverse events. Of the 107 treatments performed in the study, only 3 adverse events were reported for 2 subjects. These events were not severe and resolved or improved during the study. Anticipated treatment-associated responses with the PicoWay laser did not present any new types of safety questions as compared to the predicate devices. Therefore, the study demonstrated strong safety results of the PicoWay device for its indicated use.

Based on the clinical performance as documented in the pivotal clinical study, the PicoWay System was found to have a safety and effectiveness profile that is similar to the predicate devices.

All performance testing demonstrated that the PicoWay Laser System performs according to specifications and functions as intended.

### **Summary of Substantial Equivalence:**

The PicoWay and the predicate devices have the same intended use with the same or similar indications for use. The PicoWay Laser System presents the same or similar technological characteristics as its predicate devices, including the laser type, wavelengths, device design, pulse width, frequency, spot sizes and system components. Any minor differences do not present any new types of safety or effectiveness questions since the PicoWay parameters are the same as the PicoWay predicate. Further, PicoWay performance has been demonstrated in a clinical investigation, and results confirm the safety and effectiveness profile of the device. The PicoWay device and its predicates all operate with the same mechanism of action based on selective photothermolysis of pigment particles using laser energy. Therefore, the PicoWay has the same intended use and the same or similar indications for use, technological characteristics, and principles of operation as the predicate devices. The PicoWay is substantially equivalent to the predicate devices.

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## **Conclusions:**

Clinical testing of the PicoWay device demonstrated that the device performs as intended with a favorable safety profile. Results in the study were comparable to those reported for the predicate device, in support of substantial equivalence. The non-clinical data further support the safety of the device, and software verification and validation testing demonstrates that the PicoWay device is expected to perform as intended in the specified use conditions. The PicoWay System is substantially equivalent to the predicate devices.